

Conclusion

To conclude, I will summarise my case against weapons research. The case proceeds in two stages: it is first of all established that weapons research is morally wrong, and then it is shown that it never possible to justify it. That two stages are required is a result of the particular moral system adopted, and I will begin with this observation.

The moral framework set up in Chap. 1 is non-consequentialist because it does not hold that the rightness and wrongness of an action is solely a function of the consequences of the action and that agents must seek to maximise ‘the good’ when they act, or minimise ‘the bad’. In Chap. 1, on the other hand, I began with the Mill’s Harm Principle and then by taking my lead from Feinberg, formulated

HP: Do not harm others by invading, and so setting back, their rightful interests.

If all we know about an act is that it violates HP, then we can conclude that it is *prima facie* morally wrong. I also referred to Gert’s system of common morality. This comprises ten moral rules, eight of which prohibit specific kinds of harming. HP is a generalisation (and slight reformulation) of Gert’s rules which in turn are a (partial) specification of HP. It is convenient to have both ways of talking about harm in place. In particular, Gert’s system is helpful when we turn to justified violations of the harm principle. I said in Chap. 1 that I believed most if not all consequentialist systems could also serve as a basis for the case against weapons research but that the argument would have a different form. In fact the two steps would be reversed.

It would undermine the institution of morality to take HP to hold absolutely and without exception, because every single time anyone harmed anyone else, caused them pain for instance, this would be morally wrong, and it would follow that moral judgements would be otiose. Everyone accepts that it can be necessary to cause some pain to prevent further pain and injury. Such an action may therefore be justified and the initial judgement of moral wrongdoing withdrawn. What I have referred to as paradigm instances are those involving a medical or dental procedure, intended to alleviate pain or prevent future pain, and such procedures are not of

course always instances of moral wrongdoing. Gert discusses the justification of violating moral rules at some length and argues convincingly that the only justification is in preventing or reducing further harms. It is not however acceptable to cause even a relatively small amount of harm to a few people to give a lot of pleasure to a greater number. Thus we have

JP: The only justification for causing harm by violating the interests of moral subjects is the prevention of further harms.

JP and HP are the basic moral principles used to make the case against weapons research.¹

The first stage in making the case against weapons research is to show that weapons research is morally wrong, and to do that we needed first to know something about the activity and come up with an description of it that we can accept as applying to all instances thereof. In Chap. 2 I began with two examples of weapons research. The first of these, the Manhattan Project, showed how scientific theory could guide and inform weapons design, and were we to restrict attention to examples of this kind, we would conclude that weapons research is a species of applied science. But the second example, that of the torsion catapult, provides an alternative view, that research in the sense of careful experiment and testing can come up with new weapons without the underlying theory being available. The reasons in favour of adopting this second position are all the more persuasive because the Greek engineers left detailed designs about how to build a whole range of torsion artillery, complete with mathematical equations for calculating the key parameters. I concluded that we should date weapons research from at least 400 BCE and, on the basis of a quick examination of some even older weapons, probably earlier still. This led to

Weapons research is research carried out with the intention of designing new weapons or improving the design of existing weapons or designing or improving the means for carrying out activities associated with the use of weapons.

The last section of the chapter introduced the notion of the context of weapons research.

Research is not in itself normally a harmful activity, so if HP is to have any bearing on weapons research, some connection must be established between weapons research and harming. This is done in Chap. 3, where I argued that weapons are the means to harm, that it is morally wrong to provide the means to harm and that weapons research provides the means to harm. I introduced a taxonomy of purposes for artefacts, which distinguished primary, derivative and secondary categories. The primary purpose is what the artefact is intended to do,

¹To arrive at a judgement of moral rightness or wrongness on the basis on a consequentialist principle it is necessary first to determine the nature of the consequences. On the basis of principle CP—see Chap. 1—for example it would be necessary to see if the act maximally promotes the interests of others. Then a conclusion about the act could be made and my two steps are therefore reversed.

what function it is intended to perform. I believe that it is possible to identify a primary purpose for almost any artefact, included those ‘generic’ artefacts that seem highly versatile and have many uses. For weapons, however, it is relatively easy to show that they are primarily the means to harm, and that deterring harm, for instance, is a derivative purpose, which presupposes that they are the means to harm but not conversely. This leads to

PP1: The primary purpose of weapons research is to design new ways to harm

I claim that weapons researchers are therefore responsible for the primary purpose of creating new or improved ways to harm, for this is what they intend when they undertake weapons research. They may also be responsible for certain derivative uses, though that depends on the example in question. Designers are not normally responsible for secondary purposes, which are fortuitous.

In the last section of Chap. 3 I maintained that it is wrong to provide the means to harm. This was done with the aid of an example of a bomb maker for a terrorist organisation. The example was deliberately chosen because such organisations are illegal and (nearly) everyone condemns them, especially when they use bombs. It is thus hard to deny that the weapons designer D who makes the bombs does the wrong the thing. However, when it comes to moral wrongdoing, there is no relevant difference between D when she draws up designs for bombs without knowing when or if they will be made or used and the ‘legitimate’ weapons designers who works for a state-run organisation, because (all) the uses of these weapons are not known in advance either. The atomic bombs produced in the Manhattan Project killed many more innocent people than all the terrorist activity since. We can therefore assert

MP. If it is morally wrong to harm, then it is morally wrong to provide the means to harm.

and by HP infer

WRMR: Weapons research is morally wrong.

It does *not*, however, follow that the weapons researcher is to be held responsible and called to account for all the harms caused by the weapons produced, although this is possible and it depends on the circumstances. Weapons research is wrong because it introduces new ways of harming into the world and therefore risks those new ways being used to cause harm. Weapons researchers are guilty of wrongdoing because they intentionally design new ways to harm.

Defence is the rationale for everything to do with weapons acquisition, including weapons research, by almost everyone, as has been the case in the past. The aim of Chap. 4 was to show that this apparently reasonable viewpoint does not stand up to scrutiny. The problem is that it seems that weapons which can be used to defend against aggression and so prevent harm, in accordance with JP, can also be used for aggression. But perhaps there is a class of weapons that can only be used to prevent aggression, and in which case there would be some weapons research that was not morally wrong. This suggestion was examined and found wanting: there are no such weapons, and for two reasons. In the first place it appears that there are no

weapons that can only be used to preserve rather than attack an asset, assuming that preserving assets is the essence of defence. I conjectured that the possible use of a weapon in a defensive role was a matter of what else was available, how the weapon could be function in the context of the available military technologies, and the evidence seemed to support this viewpoint. In the second place, however, when considering the levels of strategy on which the scale and nature of fighting and planning in warfare can be differentiated, we saw that defending assets was a necessary part of offensive war, a proposition confirmed in Chap. 6.

The first conclusion of Chap. 4 is that how weapons are used is a matter of the context in which they are employed, not on their ‘nature’. The second conclusion concerns deterrence. In the last section of the chapter, we saw that deterrence is a relationship between states where one thinks that the other has certain aggressive designs and seeks to prevent those being carried out by threatening to impose unacceptable costs on the aggressor, and acquires weapons to reinforce its stance. But relations between states can change, as they did at the end of the Cold War, and weapons obtained for the ends of deterrence will no longer be needed for that purpose, but they are still the means to harm—just as is the case for defence, there are no inherently deterrent weapons. The third and final conclusion of Chap. 4 is that there can be no excuse or justification for weapons research that appeals to the inherent nature of the weapon in question, divorced from the context of its use. Or, to put the matter another way, there can be no ahistorical justification for weapons research.

If there can be no ahistorical justification for weapons research, then all attempts at justification must be *historical*, they must refer to the situations and circumstances in which weapons are actually used, and they must be such that JP is satisfied. Chapters 5 and 6 show that this demand cannot be met and hence that weapons research cannot be justified. In the first section of Chap. 5 I said that even for those paradigm cases of justified harming, namely medical procedures, it can be difficult to estimate the harms caused and harms prevented, the point being that if it is not easy to do so in these well-understood and circumscribed situations, how much harder must it be for estimating the harms caused and prevented by the products of weapons research. Indeed, even the easier task of estimating the harms caused looks impossible. As a way of trying to get round this problem, I considered two possibilities: that weapons research conducted by democratic states is justified because such states are never aggressors and only fight wars that are defensive and hence just, that weapons research conducted in the prosecution of a just war (regardless who is involved) is justified. Neither of these manoeuvres is successful. There are many examples of democratic states waging aggressive war, and the stronger they are in terms of military muscle, the more they tend to do so. As for just war, I have argued that the unknowable costs consequent on weapons research is incompatible with the *adbellum* proportionality condition of JWT, and this means that, far from being justified, weapons research is proscribed by the theory.

In Chap. 6 I gave examples which show that it is practically impossible to work out the harms caused by weapons because it is impossible to know how they will be used in the future. While this may well seem obvious, I gave some reasons why it is

true with reference to the contexts in which weapons research is conducted and in which weapons are used. The idea of context was discussed in the first section, and having mentioned and discussed the notion of the grand strategy of a state and the corresponding military doctrine, I suggested that we could make the idea a little more formal by agreeing that grand strategy is the most important element. Thus as grand strategy changes so does the context. The three examples all showed how the products of weapons research persist through changes in context and military doctrine, matters that no one could anticipate.

Final Words

In the Introduction to this book, I reflected on the possibility of weapons research coming to a halt if I could successfully make the case against it, show that it is morally wrong. I suggested that the chances of that happening were remote indeed—but hoped the book would be an interesting contribution to philosophy, which would be enough for me! I then made three comments, including noting that if moral progress is possible, someone needs to take the first step. But what would happen if states began to give up weapons research? Those with vested interests, and those seduced by the standard rationale, will deny that this is a good idea, or even possible. States who do not modernise their defence forces will become weaker and prey to pragmatic states who continue to invest in weapons research.

But that need not be true. Consider again states A and B, the erstwhile rivals: instead of B embarking on an intense round of weapons research in response to perceived threats from A, it phases out all its weapons research. What would A's reaction be, wait until it has clear military superiority and then coerce B to do its bidding? Why should this happen? Could not A now see that B is not a threat to its security and decide to slow down its own weapons research programmes, and phase them out as well when it sees how much money it has saved? We have here a reversal of Jervis' security dilemma: states feel more and more secure so continue to reduce their armed forces, instead of an arms race, we would have a 'disarmaments race'. Why could not this happen? If it did, then countries could get on with problems that really do threaten their security, like climate change and poverty, things which really affect people and cause them harm. States could cooperate and take steps to reduce these harms rather than spending huge sums of money producing new ways to harm. Surely that makes sense?

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